lt Metraux E-5 (1934-1935) 1940
OY2 Easter Islanders OY2

212 114 as to the sex, the time of birth, and the deeds of the person involved might have been committed to the signs. However, there is no indication that some figures had mnemonic value and others a symbolic meaning. If lines of ancestors were indicated by the rows of signs, we might expect the repetition of certain groups of symbols corresponding to the name of an ancestor, but repetition is exceptional. There are no signs, no divisions, no stop marks which would facilitate the recitation of genealogies.

To substantiate by direct evidence the genealogical interpretations of the tablets, Geiseler (87, p. 27) gives to the sign representing Makemake the symbolic meaning of "birth", and to the sign of the vulva the meaning of "legitimate marriage." These translations are obviously mere guesses. Further, Geiseler makes the absolutely false statement that the two signs are generally combined. Thomson (215, p. 517) adopts Geiseler's views without giving new evidence. Haberlandt (97, p. 100) concludes that the tablets are genealogical lists, although he is well aware that the "signs are too variegated and too intricate" for such a record.

Of the tablet chants recited for Thomson one was a creation chant explaining the formation of nature after the pattern of a human genealogy (p. 320)—a literary theme dear to the natives of eastern Polynesia. If the tablets were accessories to chants, they must have been associated with genealogies, for lists of divine and human ancestors were chanted at the feasts. But association does not prove that the tablets were devices for recording genealogies. The form of the Polynesian genealogies excludes entirely the use of geometrical and naturalistic figures merely to count people.

532 212 114 In spite of statements to the contrary (139, p. 263), there is neither a single rock nor a single stone statue on which inscriptions have been carved. Isolated figures identical or similar to those of the tablets are carved on rocks and on the walls of caves, are painted on stone slabs, or engraved on skulls. But they do not form an inscription. This absence of inscriptions on an island where rock carvings abound is significant; one may well wonder why people who were so prone to trace designs on either hard or soft rocks have never immortalized a name or an event with an inscription, if they had a knowledge of script. The symbols which appear on tablets and elsewhere are: the design of the vulva; *rei-miro* (pectorals); figures of birds (sooty terns and frigate birds), sometimes with a double head; the bird-man; the *ao* (dance paddle), though designs of *ao* are rare and indistinct on the tablets; fish; and rarely men (two petroglyphs near Rano-raraku recorded by Lavachery, and design in the interior of a cave on the island of Motu-nui). The resemblance between the style of the tablet signs and that of the petroglyphs is striking.

212 114 Many authors (81, vol. 38, p. 71; 215, p. 517) have seen among the naturalistic symbols on the tablets some forms, unknown on Easter Island, which indicate the locality whence the first settlers came. Thus Hevesy has interpreted what is probably a pelican with a long curved beak as an elephant and the bird-man as a monkey. The signatures of the chiefs to the deed of possession, drawn up when the Spaniards annexed the island in 1770, have been used as evidence of the existence of script on Easter Island. However, with the exception of a bird figure, these signatures are composed of meaningless scrawls not connected with the tablets. The treaty of Waitanga, signed by Maori chiefs, has tattooing marks and other designs in lieu of signatures.

EASTER ISLAND SCRIPT

212 121 Thus far no methodical analysis has been made of the signs on the tablets. Such a study is a slow and complicated task because of the abundance of signs, the innumerable variants of each sign, and the many combinations of signs. It is necessary to determine how many times each sign is repeated on a tablet and how often it occurs in each row. Contiguous signs and sequences must likewise be recorded. If the signs are a form of writing and correspond to

1: Metraux E-5 (1934-1935) 1940
OY2 Easter Islanders OY2

words or syllables, groups or sequences of them will be repeated many times, especially for a Polynesian language. . I have been able to analyze only a few tablets, devoting most of my time to the long tablets called Aruku-kurenga and the Oar. A cursory examination of the three tablets preserved in the Museum of Santiago de Chile convinced me that the results would have been the same. I wish that investigators who enjoy greater leisure than I would apply my method to other tablets. It is the only way to establish the true nature of this writing. Any other method results in mere speculations, without scientific value.

The first step in analysis is to find the limits of each individual sign. The figures are either isolated or linked to the contiguous ones. Though sometimes loose, these connections seem to be intentional. I am strongly inclined to believe that these compound signs have no definite meaning of their own independent of the elements which compose them and that they are the conventional products of a sort of "cursive writing." On the tablet Aruku-kurenga and on the Oar there are several groups of signs which are identical. The symbols which compose them are similar but in some groups they have been joined together; in others they are disconnected. Apparently the connections between the signs had no significance.

However, there are some combinations which are so close that they actually form a new and special sign (fig. 57). For instance, a sign becomes the head of a human body or combines with another to form a fantastic being. But even when signs are fused together, it is possible that each retains independent value.

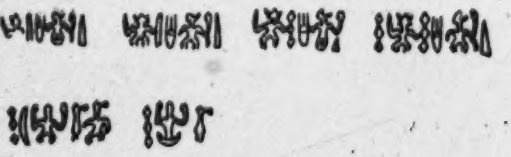

FIGURE 57.—Sequences of identical signs in row 1 of tablet Aruku-kurenga.

The second step in analyzing the tablets is to determine whether variants of a sign have a particular meaning. The naturalistic symbols representing human beings or animals are seldom twice identical. Sometimes the variations are insignificant, sometimes more important, but they rarely suggest definite intention. It is inconceivable that a particular significance would be given to the presence or absence of an arm or a leg, the position of the head, or the form of a hand. If some of these variants recurred consistently they might indicate independent symbols, but they do not. In table 5, I have listed the signs used in the tablet called Aruku-kurenga, giving each sign and all its

1: Metraux E-5 (1934-1935) 1940
OY2 Easter Islanders OY2

212
121

variants. Many differences in the carving of the signs have resulted from lack of space or the nature of the contiguous sign.

On the tablet Aruku-kurenga identical sequences of signs are rare. In row I, group *a* is repeated five times, group *b* twice (fig. 57). The sequences are not always identical. In the last *a* group the second sign is a bird, whereas in the preceding groups it is a stick. In the second *b* group, the crescent has been shifted from a vertical to a horizontal position replacing the feet of the contiguous figure; the last sign is lacking.

In row VI a sequence of four signs is repeated three times. Here again the similarity between the groups is not perfect. The second sign in the first group has a conventionalized head of a man, which in the other two groups is replaced by a bird (the tern). As these sequences occur in the same line, they do not give complete evidence that they express the repetition of the same idea. The artist may well have repeated a sequence to fill the line, or for a simple decorative or psychological reason. More puzzling is the repetition of sequences in different rows. A group of 12 signs in row IX reappears in almost identical form on the other side of the tablet in row XIII. A group of four signs occurs twice in row XV and twice in row XVII.

On the large tablet called the Oar, groups of signs are more frequently repeated. One group of three signs is repeated six times in the same row. Eight repetitions of the same sequence of signs almost fills another line. The groups are not identical, but the variations affect only two or three signs; the others remain the same and keep the same order.

Repetition of the same groups of signs would be of the utmost importance if they were more frequent. The few repetitions I cite here occur on two large tablets of about 1,000 and 1,500 signs respectively, and are not conclusive evidence of the existence of a definite system of transcription. Identical sequences in the same line may have been more or less automatic, for the artist may have repeated his grouped signs until he no longer had them in mind. This explanation is hardly acceptable when the repetitions are far apart, but it is not known whether the artist copied some model or whether certain associations of signs were imposed by tradition. If the tablet reproduced a chant, there would have been more repetition at definite intervals. Some signs may have been associated because of their symbolic meaning and would thus have a definite significance. Groups of signs show that the variants had no particular value. A sign could be replaced by another sign, the outline of which was only slightly similar. For instance, one bird might be replaced by another kind of bird, a personage by a personage of more conventionalized form.

In counting the signs of tablet Aruku-kurenga I considered the groups as one sign in order to avoid confusion, though I am well aware that most of the compound signs should be broken up into their component elements. The total number of signs thus counted is 960, of which 95 are primary signs, a figure which corresponds more or less to the total number of symbols used by the Easter Island *rongorongo*. In the other tablets I found only four or five signs which did not appear on the tablet Aruku-kurenga. The listing of the primary signs is difficult. Many signs can be considered either unique or simple variations of other signs. For the sake of clarity, I have considered compounds as new signs whenever the two elements were closely fused. Many signs have been considered primary symbols, though they may be only variants of others which are poorly carved or distorted by lack of space. Allowing a margin for this unnecessary enlargement of the list, we may estimate the number of symbols used by the tablet carvers at about 100.

2:Ferdon A-5 (1956) 1957
OY2 Easter Islanders OY2

177 Today one's initial contact with Easter Island natives and their village of Hangaroa creates the definite illusion that here acculturation toward a Chilean pattern approaches completion and it is only a question of the government's passing the necessary laws to give them the right to vote until final absorption will be well on its way. Such traits as European style frame or cement-walled houses with corrugated-tin roofs, the full acceptance of the riding aspect of horse culture, the occasional use of ox carts and ox-drawn plows, and the complete acceptance of European style clothing, including well polished shoes on Sunday, reflect a more rural Continental setting than a Polynesian-inhabited island in the Pacific. Contacting the Chilean officials, one soon meets their native aides: mechanics who can take a Jeep apart and put it together again; a machinist renowned for fixing the most delicate wrist watches on the island; a budding meteorologist who, for the past two years, has been one of the instrument observers at the Chilean Air Force meteorological station. These are, to be sure, extreme cases, often representing men who have been sent to Chile for advanced education or who have made a living on the continent for several years. However, they fit so well into the observed modification toward Chilean culture that their somewhat extreme positions in the acculturation pattern are not readily apparent. Certainly Easter Island, [105] seen from an archaeologist's point of view, i.e., from the material culture evidence, presents a picture in 1956 of a dominantly Europeanized culture with a minor lag showing up in such things as the continued use of adzes, now made of steel, a customarily separate kitchen in the family architectural layout, a continued use of certain Polynesian foods, and a highly developed woodcarving tradition obviously kept alive by the products' salability to the tourists during their annual invasion of the island.

121 During the five month excavation season of the Norwegian Archaeological Expedition to Easter Island, no time was available for an intensive study of Rapanui culture as it is today. However, through director Thor Heyerdahl's interest in aiding the islanders' economy by using them wherever possible, opportunity was made available to the archaeologists to gather ethnographic data. During my 115 excavation of various sites on the volcano of Rano Kao I employed four Easter 124 Islanders: Jorge Tepano, Roberto Tepano, Juan Atan, and Rafael Roe. These men, perforce, served as my informants, the periods of "interview" consisting of directed conversations while riding up the volcano to work, during the lunch hour, and again during the afternoon descent. These were occasionally supplemented by specific appointments, usually with Jorge Tepano, the most knowledgeable of the four. There was no time nor opportunity to cross-check my information with natives other than my four workers, so that the data presented below are

3:Drapkin D-5 (1934-1935) 1935
OY2 Easter Islanders OY2

CONTRIBUTION TO THE DEMOGRAPHIC STUDY OF EASTER ISLAND*

By I. Drapkin, M.D.

INTRODUCTION

This demographic study is part of a series of undertakings carried out on the spot by the Franco-Belgian Scientific Expedition, under the direction of Mr. A. Métraux, from July 1934 to January 1935. In my capacity as doctor, delegated by the Chilean Government, I took charge of all the researches concerning demography, the sanitary condition of the natives, as well as the formation of natural science collections. 121

The various data which I endeavored to bring together, systematically arranged, doubtless will contribute to the presentation of a correct idea of the actual demographic condition of the indigenous population of this island.

CENSUS

Most of the navigators who have visited Easter Island since Roggeveen have made varied and conflicting estimates of the number of the inhabitants. As these estimates had to do with impressions rather than observations founded on exact facts, one should not fail to take that into account. 161 175

The first actual census of the population of Easter Island was made at the end of 1886 by Mr. A. A. Salmon, who had arrived a short time before on the American warship *Mohican*. According to Salmon, there were then 155 natives grouped as follows: 162

Children Under 15 Years	
Male	17
Female	27
Adults	
Male	68
Female	43
Total	155

Thomson,[1] to whom we owe these valuable facts, adds that the number of the natives remained the same during many years, with a 161 175

* Translated by Margaret Titcomb, Librarian, Bernice P. Bishop Museum.

[1] Thompson, William J., Te pito te henua or Easter Island: Smithsonian Inst., Nat. Mus., Rept., pp. 460-461, 1888-89.

[p. 3]

[p. 2 blank]

4:Metraux E-5 (1934-1935) 1945
OY2 Easter Island OY2

had fallen, again emphasised their enigmatic relation to the lost civilization, of which the statues and great stone mausoleums as well as other finely wrought remains of the past were mute evidence.

Then scientists began to study Easter Island. At what time and by what manner of men, they asked, were these images made, with their colossal bulk, their empty eyes and scornful expressions? Was the island the remnant of a sunken continent? Had it been inhabited by a powerful earlier race which had died out, or been destroyed and displaced by more warlike conquerors? Had eruptions of the volcanoes exterminated the skilled craftsmen, the sculptors, and the architects, leaving only a small group of people too discouraged and weak to continue the work of their forefathers? These are among the questions that still puzzle students.

The statues symbolize the mystery of the island and have made it famous. Yet their paradoxical presence on this speck of land in the midst of the Pacific is perhaps less difficult to understand than are the wooden tablets covered with small incised designs that were collected from the natives in the second half of the last century. The tablets raised the fascinating question whether their makers used on them a kind of hieroglyphic script which might some day be deciphered and would unveil the secret of its past. But all attempts to decipher them, with the help of intelligent natives, failed.

A few years ago the study of the tablets took an unexpected turn. A Hungarian linguist, Guillaume de Hevesy, published a long list of Easter Island hieroglyphs which, it was claimed, presented very striking analogies with the symbols of a newly discovered script found in the ruins of a civilization, 5,000 years old, in the Indus Valley at Mohenjo-daro and Harappa. There, coetaneous with the Sumerian civilization, flourished large and opulent cities inhabited by people whose name and affiliations are totally unknown to us. They were wiped out probably at the time of the Aryan, and their existence remained unsuspected until the great excavations of Sir John Marshall. The Mohenjo-daro people have left a great many inscriptions on seals which have so far resisted any attempt at decipherment. If it could be shown that the two scripts were related, new light might be thrown on the obscure past of the whole Pacific area.

The problem thus posed was of such significance for an understanding of the early history of man that the French Government in association with the Belgian Government decided to organize an expedition to Easter Island to try to read its riddle. The leader of the expedition was a French archeologist, Charles Watelin, who, unfortunately, died in Tierra del Fuego. I was then asked to carry on the research, in association with the Belgian archeologist, Dr. Henry Lavachery.

5: Roggeveen T-5 (1721-1722)1908
OY2 Easter Islanders OY2

reckoning 27 degrees 4 minutes South, and long. 265 degrees 42 minutes. In the ninth glass of the afternoon we saw smoke rising in several places from which we concluded that there were people dwelling on the same. We therefore thought it would be well to consider with the Captains of the other ships whether it were not needful to undertake an expedition ashore, to the end that we might gain a fitting knowledge of the interior of the country. On this, it was decided that both the shallops of the Ships *AREND* and *THIENHOVEN*, well manned and armed, should proceed inshore, and find out a convenient place for landing a party from the boats, and also to take soundings. This decision being come to, we stood off and on for the night with our Ships. Which Resolution is as follows:—

COUNCIL of the Commanders of the three Ships sailing in company held on board the *AREND*, in the presence of the undersigned.

Monday the 6th of April, 1722.

"The President submitting that we had now arrived within a distance of some two miles of the *Sandy Island*, the which lies in an Easterly direction from the stretch of coast (as yet out of sight) which it is one of the objects of this Expedition to discover, and as we have seen smoke ascending in several places, from which it may reasonably be concluded that the aforementioned Island, although it may be shown to be sandy and barren, has nevertheless human inhabitants; now, therefore the President moves that it would be culpable to proceed in a careless and negligent manner, and that we should stand off and on for to-night with our ships, and that on the arrival of daylight we send close in to the land two well manned shallops,

5: Roggeveen T-5 (1721-1722)1908
OY2 Easter Islanders OY2

121 properly armed (that we may be in a state of defence in case of any hostile meeting), and show all friendliness towards the inhabitants, endeavouring to see and inquire what they wear or make use of either as ornaments or for other purposes, also whether any refreshments in the way of green stuff, fruit, or beasts can be procured by barter. Which motion having been discussed, the same is by common assent approved and adopted: and it is farther decided that both the shallops of the Ships *AREND* and *THIENHOVEN*, shall proceed at daybreak, and that *THE AFRICAN GALLEY* should follow as close to the land as possible and prudent, covering and defending the said shallops (should need arise). Resolved and attested in the said Ship and on the day above mentioned. (Signed): JACOB ROGGEVEEN, JAN KOSTER, CORNELIS BOUMAN, ROELOF ROSENDAAL."

123 7. The weather was very variable, with thunder, sheet lightning and showers. The wind unsteady from the North West, and occasional calms, so that our shore expedition could not be undertaken with any prospect of success. During the forenoon Captain BOUMAN brought an Easter Islander on board, together with his craft, in which he had come off close to the Ship from the land; he was quite nude, without the slightest covering for that which modesty shrinks from revealing. This hapless creature seemed to be very glad to behold us, and showed the greatest wonder at the build of our Ship. He took special notice of the tautness of our spars, the stoutness of our rigging and running gear, the sails, the guns—which he felt all over with minute attention—and with everything else that he saw; especially when the image of his own features was displayed before him in a mirror, seeing the which, he started suddenly back and then looked towards

10: Cooke D-5 (1886) 1899
OY2 Easter Islanders OY2

TE PITO' TE HENUA, KNOWN AS RAPA NUI; COMMONLY CALLED EASTER ISLAND, SOUTH PACIFIC OCEAN. LATITUDE 27° 10′ S.; LONGITUDE 109° 26′ W.

By George H. Cooke,
Surgeon, United States Navy.

INTRODUCTION.

The U. S. S. *Mohican* sailed from the port of Callao, Peru, March 6, 1868, under orders for a protracted cruise, on special duty, among the islands of the South Pacific, with instructions, on her return passage to the South American coast, to call at Easter Island, make certain investigations desired by the Smithsonian Institution, and especially to bring away one of the colossal stone images to be found upon the island.

After a passage of thirty-two days the Marquesas group was reached, but the authorities, wishing to impose quarantine upon the ship, a stay of a few hours only was made, and we pushed on to the island of Rairoa, in the Tuamotu, or Low Archipelago. From thence the ship visited, at various times, and in some instances repeatedly, the Society Islands, the Samoan Group, the Tonga Group, the Fiji Islands, and New Zealand, and took her final departure from Tahiti for Easter Island and the South American coast November 16, dropping anchor in Hanga Roa Bay, west coast Rapa Nui, December 18.

The stone image, stone crown, and stone head, for the Smithsonian Institution, having been successfully transported over the island to the beach and thence transferred on board, the ship sailed on the last day of the year for Valparaiso, Chile, arriving at the latter port January 14, 1887, having performed the duty assigned her, in which all on board took the liveliest interest.

The writer has confined himself, as strictly as circumstances would admit, to the line of investigation assigned him, in order that there might not be a needless repetition in the reports of the several officers concerned in the work.

In the preparation and collation of the glossary the writer has been ably assisted by Lieut. William E. Safford, U. S. N.

[p. 690 blank]